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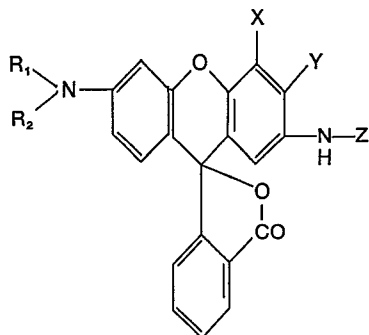
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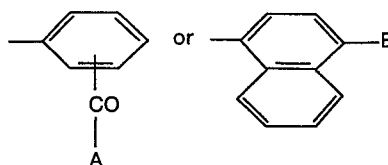
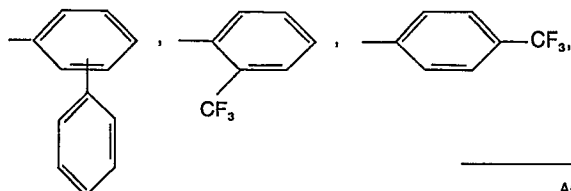
54 **Fluoran derivatives, process for their preparation and their use in recording systems.**

57 A new fluoran derivative useful as a colorless chromogenic material has the general formula:

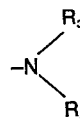


wherein R₁, R₂, X, Y and Z have the same meaning as defined hereinbefore.

Specifically Z is -CH₂COOCH₂CH=CH₂,



A is an alkyl having 1 to 18 carbon atoms or an aryl which may be substituted by at least one substituent selected from the group consisting of halogen atoms and alkyls having 1 to 4 carbon atoms, E is hydrogen or



each R₃ and R₄ is hydrogen, an alkyl having 1 to 4 carbon atoms or phenyl;

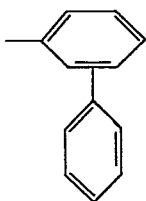
each R₁ and R₂ is an alkyl having 1 to 12 carbon atoms, an aralkyl having 7 to 9 carbon atoms, cyclohexyl or phenyl which may be substituted by at least one substituent select-

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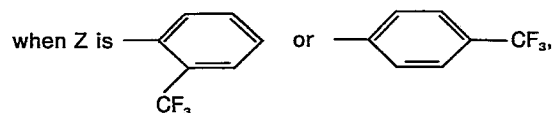
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ed from the group consisting of halogen atoms and alkyls having 1 to 4 carbon atoms, or both of R_1 and R_2 together with the adjacent nitrogen may form a heterocyclic ring; X is hydrogen, halogen atom, an alkyl having 1 to 4 carbon atoms or an alkoxy having 1 to 2 carbon atoms; and Y is hydrogen, halogen atom or an alkyl having 1 to 4 carbon atoms; however,

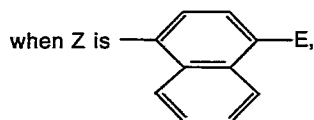
when Z is $-\text{CH}_2\text{COOCH}_2\text{CH}=\text{CH}_2$ or



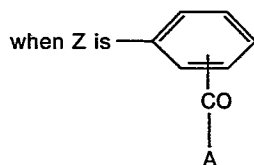
each R_1 and R_2 is an alkyl having 1 to 12 carbon atoms or an aralkyl having 7 to 9 carbon atoms,



each R_1 and R_2 is an alkyl having 1 to 4 carbon atoms, X is hydrogen and Y is hydrogen or methyl,



each R_1 and R_2 is an alkyl having 1 to 12 carbon atoms or an aralkyl having 7 to 9 carbon atoms, and, at least one of X and Y is selected from the before-mentioned substituents other than hydrogen, and



A is an alkyl having 1 to 18 carbon atoms and each R_1 and R_2 is an alkyl having 1 to 12 carbon atoms or an aralkyl having 7 to 9 carbon atoms,

at least one of X and Y is selected from the beforementioned substituents other than hydrogen.



European Patent
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EUROPEAN SEARCH REPORT

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Application Number

EP 83 30 0943

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.4)
A	GB-A-2 002 801 (YAMADA CHEMICAL CO. LTD.) * Claims 1-5, 14; examples of synthesis 1,4,5; pages 23,24; examples of application; page 2, line 65 -, page 3, line 17 *	1,4,9-14	C 07 D 493/10 B 41 M 5/00 B 41 M 5/12 // (C 07 D 493/10 C 07 D 311:00 C 07 D 307:00)
P,A	--- PATENT ABSTRACTS OF JAPAN, vol. 7, no. 39, 17th February 1983 (C-151)(1184); & JP-A-57-190049 (YAMADA KAGAKU KOGYO K.K.) 22-11-1982	1,4,9,13,14	
A	--- DE-A-2 446 313 (SUMITOMO CHEMICAL CO., LTD.) * Claims 1, 44-48; page 8, line 3 - page 10, line 14 *	1,5,9,10,12-14	
A	--- DE-B-2 024 859 (FUJI PHOTO FILM CO.) * Claims; column 5, line 31 - column 6, line 3; column 2, lines 64-68 * -----	1,9-14	
The present search report has been drawn up for all claims			
Place of search BERLIN		Date of completion of the search 15-02-1985	Examiner HASS C V F
<p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document</p>			